U N I T E D 2 0 0 2

Nebraska's Statewide Technology Plan

June 2002
State of Nebraska
Nebraska Information Technology Commission
521 S. 14th Street, Suite 200
Lincoln, NE 68508-2707
(402) 471-3560

UN**IT**ED 2002 Nebraska's Statewide Technology Plan
is available from the NITC Web site:
http://www.nitc.state.ne.us

Table of Contents

Section 1

Goals

Section 1

Goals

NITC Vision Statement

Promote the use of information technology in education, health care, economic development, and all levels of government services to improve the quality of life of all Nebraskans.

NITC Mission Statement

"The mission of the Nebraska Information Technology Commission is to make the State of Nebraska's information technology infrastructure more accessible and responsive to the needs of its citizens, regardless of location, while making investments in government, education, health care and other services more efficient and cost effective."

NITC Goals and Objectives

The NITC has adopted the following goals and objectives. The objectives are cross-referenced to specific action-items of the Community Council (CC), Education Council (EC), State Government Council (SGC), and Technical Panel.

1. Support the development of a robust statewide telecommunications infrastructure that is scalable, reliable and efficient. Objectives:
   - 1.1. Facilitate pilot projects to demonstrate the viability of aggregating and leveraging public sector purchases of telecommunications services to promote a robust telecommunications infrastructure (NETCOM). Develop institutional arrangements, define a technical architecture, and adopt a timeline to achieve statewide expansion of the NETCOM infrastructure. (TP 1.1, EC 1.2)
   - 1.2. Study the feasibility of sharing networks and network support functions serving multiple sectors (Nebraska Network Feasibility Study). (TP 1.2, EC 1.1 and 1.3)
   - 1.3. Identify the levels of telecommunication services that different sectors will require, including business, health care, and education. Identify strategies to achieve these levels of service, including the role of communities. Monitor differences in service levels and cost. (TP 1.3)

2. Support the use of information technology to enhance community and economic development. Objectives:
   2.1. Provide guidance and assistance to community technology committees, including coordinating efforts to implement the Technologies Across Nebraska action plan. (CC 1)
   2.2. Develop a vision and strategy for expanded use of telehealth. (CC 2)
   2.3. Support strategies for developing "intellectual infrastructure". (EC 2.1, 4.1, and 4.2)

3. Promote the use of information technology to improve the efficiency and delivery of governmental and educational services, including Homeland Security. Objectives:
   3.1. Support planning and coordination of information technology investments relating to Homeland Security. (CIO Staff)
   3.2. Support successful implementation of the Nebraska Information System (NIS). (TP 3.1)
   3.3. Support implementation of the state's E-government strategy. (SGC 1.1, 1.2, and 1.3)
   3.4. Adopt technical standards, guidelines and enterprise methods to promote efficient use of information technology. (SGC 2.1 and TP 2.1)
   3.5. Promote activities to protect the security of information technology systems. (SGC 2.1; TP 1.2 and 2.1)
   3.6. Define the role of the NITC with respect to local government technology issues, and the relationship of the NITC to existing state and local coordinating entities. (CIO Staff)

4. Promote effective planning, management and accountability regarding the state's investments in information technology. Objectives:
   4.1. Evaluate the existing procedures for project planning and management and technical review of state-owned or state-supported information technology investments. (EC 3.1; SGC 3.1 and 3.2; TP 3.1)
   4.2. Document progress in achieving the goals and objectives of the NITC. (CIO Staff)
   4.3. Assist the Governor and Legislature by reviewing technology-related budget requests and providing a prioritized list of projects. (TP 3.1)

NITC/CIO Customer Service Policy

General Statement of Operations

The NITC and the Chief information Officer (CIO) emphasize collaboration for establishing goals and carrying out their statutory duties. Success of the NITC and the CIO depends on the willing cooperation of independent, public and private, state and local, entities. State statute explicitly recognizes the importance of "coordinating the state's investments in information technology in an efficient and expeditious manner." (Section 86-1502) The same statute directs the NITC and CIO to achieve this goal in a manner that does not "impede the rapid deployment of appropriate technology or establish cumbersome regulations or bureaucracy. "

Customer Service Strategy

1. **Open Process and Participation**
   Good customer relations require involving representatives of all relevant perspectives in the decision-making process. The NITC has sought to achieve this by insuring broad-based representation on the Community, Education and State Government Councils. In addition, the Statewide Technology Plan provides a means for including the work of other coordinating bodies, such as the Geographical Information System (GIS) Steering Committee and Criminal Justice Information Systems (CJIS) Advisory Committee.

2. **Communication**
   The NITC promotes good communication by making effective use of the Internet. Meeting notices, agendas, minutes, and working documents are posted on the NITC website (www.nitc.state.ne.us). Councils and workgroups have fully developed websites that are linked to the NITC homepage. In addition, NITC publishes an electronic newsletter (NITC.news), which has a distribution list of over 800 individuals.

3. **Executive Branch Relations**
   The Lieutenant Governor serves as chair of the NITC and has direct supervisory authority over the CIO. Gubernatorial appointees or their representatives serve on the NITC, Community Council, Education Council, State Government Council, Technical Panel, GIS Steering Committee, GJIS and

Nebraska Intergovernmental Data Advisory Council (NIDCAC). Many state agencies are members on one or more of these groups.

4. Judicial Branch Relations

The State Court Administrator has a representative on the State Government Council. The CIO is a member of the Criminal Justice Information Systems (CJIS) Advisory Committee, which promotes data sharing among all entities involved in criminal justice.

5. Legislative Branch Relations

The NITC has invited chairs of the Appropriations and Transportation Committees to discuss their interests regarding the proper role of the NITC. Both committees share oversight responsibilities that include conducting a performance review of the NITC every two years (Section 86-1514). In addition, the Legislature confirms appointments to the NITC and the position of CIO. The Legislative Fiscal Office has a representative on the State Government Council.

6. Local Government Relations

The CIO and the NITC will promote a good working relationship with associations representing local governments for cities, counties, schools and colleges. Representatives of local government serve on the Community Council, GIS Steering Committee, and CJIS.

7. Private Sector Involvement

The NITC has used meetings with telecommunications providers to discuss topics of mutual interest. The Community Council, Education Council, State Government Council and several workgroups include representatives from private sector organizations.

8. Public Involvement

The NITC and CIO promote public involvement by providing a significant amount of information on the NITC web site. This includes meeting notices, agendas, minutes and important documents.

Section 2

Council Priorities And Action Plans

Section 2

Council Priorities and Action Plans

Authority

"The Commission shall: … establish ad hoc technical advisory groups to study and make recommendations on specific topics, including work groups to establish, coordinate, and prioritize needs for education, local communities, and state agencies." [Neb. Rev. Stat. Section 86-1507(7)]

"A technical panel is created. The technical panel shall be comprised of one representative from the Nebraska Educational Telecommunication Commission, one representative from the Department of Administrative Services, one representative from the University of Nebraska Computing Services Network, one representative from the project sector, and such other members as specified by the Nebraska Information Technology Commission." [Neb. Rev. Stat. Section 86-1511(1)]

Overview

The NITC has established three advisory groups -- Community Council, Education Council, and State Government Council -- to provide input and make recommendations regarding their sectors of interest. Each council has a charter, adopted by the NITC, which establishes the council membership, responsibilities, and meeting procedures. Procedures for establishing advisory groups and the charters of these three councils are located at http://www.nitc.state.ne.us.

The Technical Panel is a statutory body, which provides technical analysis and recommendations to the Commission. The Technical Panel has a charter, adopted by the NITC, which establishes the panel membership, responsibilities, and meeting procedures. The charter is located at http://www.nitc.state.ne.us.

The NITC also recognizes the important contributions of other information technology coordinating entities, such as the Criminal Justice Information Systems (CJIS) Advisory Committee, and the Geographic Information Systems (GIS) Steering Committee.

CJIS includes representatives of state and local agencies involved in all aspects of criminal justice. Established by the Nebraska Commission on Law Enforcement and Criminal Justice, the CJIS Advisory Committee conducts strategic planning and sponsors automation and data sharing projects. The CJIS Advisory Committee periodically briefs the NITC on its activities and receives some funding from the Information Technology Infrastructure Fund, which requires NITC oversight. The CJIS Advisory Committee recently added the Chief Information Officer to its membership. Further information about the CJIS Advisory Committee is available at: http://www.cjis.state.ne.us/.

The Legislature established the GIS Steering Committee in 1991 (Sections 81-2601 through 81-2605), in an effort to coordinate the implementation of GIS technology by state and local governments in Nebraska. Membership on the GIS Steering Committee includes local, state, and federal representatives. The GIS Steering Committee has prepared a strategic plan ("Building a Spatial Data Infrastructure for Nebraska – December 2001"), with long-range goals and shorter-term initiatives. The Chief Information Officer represents the Director of the Department of Administrative Services on the GIS Steering Committee. Further information about the GIS Steering Committee is available at: http://www.calmit.unl.edu/gis/.

The NITC encourages other information technology coordinating entities to collaborate with the NITC and its advisory councils.

Community Council

Background

The Community Council is an advisory committee composed of representatives from rural and community IT development, local governments and libraries, telehealth, resource providers, and other groups as deemed appropriate by the Community Council and the NITC. The Council's purpose is to identify, prioritize, and coordinate user needs with respect to community information technology.

Mission

The mission of the Community Council is to foster the collaborative and innovative use of technology through partnerships between public and private sectors, to improve teleliteracy, and to support community and economic development for Nebraska citizens.

Membership

The Community Council has 18-24 members from each of its three focus areas (rural and community information technology development, local governments and libraries, and telehealth), resource providers, and other groups as deemed appropriate by Community Council and the NITC.

Priorities

The Community Council will pursue activities that support efforts to:

CC 1. Develop leadership capacity in Nebraska's communities to address IT development.

CC 2. Promote the development of an infrastructure (including sufficient bandwidth) that is secure, affordable, reliable, and responsive to the specific needs of various sectors. Efforts should be made to ensure that systems across the state are compatible.

CC 3. Support the development of the intellectual infrastructure necessary for Information Age development. Intellectual infrastructure includes the development of a workforce knowledgeable of and fluent in the use and applications of information technology and the availability of IT support services.

CC 4. Encourage the use of information technology to enhance community and economic development.

CC 5. Foster awareness and collaborative and innovative uses of information technology by local governments to reduce costs, improve efficiency, and provide better customer service.

Education Council

Background

The Education Council is a 16-member advisory committee composed of representatives from K-12, postsecondary education, and four state agencies. The purpose of the Council is to identify, prioritize, and coordinate user needs with respect to educational information technology.

Mission

The mission of the Education Council is to advise the Commission concerning education information technology needs, goals, and policy. The Council will identify, coordinate, and prioritize matters pertaining to information technology for a more strategic and cost-effective approach to developing the State's education information technology infrastructure.

Membership

The Council has 16 members, eight representing the K-12 sector, eight representing the postsecondary sector, and four non-voting ex officio representatives of the Department of Education, the Coordinating Commission for Postsecondary Education, the Department of Administrative Services, and the Nebraska Educational Telecommunications Commission.

Priorities

The Education Council will pursue activities that support efforts for:

EC 1. Provision of an infrastructure that will permit all citizens of Nebraska to have access to the same educational experiences, regardless of location;

EC 2. Identification and facilitation of diverse training opportunities;

EC 3. Ensurance of life cycle funding;

EC 4. Accommodation of learner needs;

EC 5. Coordination of statewide education I.T. efforts and resources, including collaboration with public and private entities;

EC 6. Pursuit of leading edge technology applications to enhance teaching and learning.

State Government Council

Background

The Nebraska Information Resources Cabinet (IRC), created in January 1996 by Executive Order, was a predecessor to the current State Government Council. After it became a statutory body in 1998, the NITC established the State Government Council and gave it functions that had been assigned to the IRC. The State Government Council focuses on information technology issues that affect state government agencies.

Mission

The mission of the State Government Council is to provide direction and oversight for state government information technology vision, goals and policy.

Membership

The State Government Council has 19 members representing state agencies and 2 members chosen from the private sector, with experience in managing major information technology systems.

Priorities

The State Government Council will pursue activities that support efforts for:

SGC 1. Implementing electronic government (e-government) to provide for a cost effective, efficient delivery of services while maintaining necessary security and confidentiality of non-public information;

SGC 2. Improving collaboration and efficiency through technical standards, guidelines, and enterprise solutions;

SGC 3. Providing a planning and implementation process for IT projects which avoids unnecessary delay and bureaucracy;

SGC 4. Implementing appropriate policies for information technology related security and privacy.

Technical Panel

Background

The Technical Panel is a statutory body, which provides technical analysis and recommendations to the Commission. The Technical Panel is codified at Neb. Rev. Stat. § 86-1511.

Mission

The mission of the Technical Panel is to assist in the development of a statewide technical infrastructure that will be scalable, reliable, and efficient.

Membership

The Technical Panel consists of three members designated by statute and four other representatives specified by the Commission.

Priorities

The Technical Panel will pursue activities that:

TP 1. Support the development of a robust statewide telecommunications infrastructure that is scalable, reliable and efficient;

TP 2. Develop a technical architecture, including recommended standards and guidelines, to provide for interoperability and greater efficiency in IT systems;

TP 3. Review technology projects or requests for funding recommended to the NITC, including budget requests, NITC grant requests, and Information Technology Infrastructure Fund projects.

Community Council
Of the
Nebraska Information Technology Commission

CC Priorities and Action Items for 2002-03

Priorities

The sector priorities of the Community Council of the Nebraska Information Technology Commission are to:

CC 1. Develop leadership capacity in Nebraska's communities to address IT development.
CC 2. Promote the development of an infrastructure (including sufficient bandwidth) that is secure, affordable, reliable, and responsive to the specific needs of various sectors. Efforts should be made to ensure that systems across the state are compatible.
CC 3. Support the development of the intellectual infrastructure necessary for Information Age development. Intellectual infrastructure includes the development of a workforce knowledgeable of and fluent in the use and applications of information technology and the availability of IT support services.
CC 4. Encourage the use of information technology to enhance community and economic development.
CC 5. Foster awareness and collaborative and innovative uses of information technology by local governments to reduce costs, improve efficiency, and provide better customer service.

Action Items

Action Item CC 1

Title: Technologies Across Nebraska

Description: Work with the University of Nebraska and other Technologies Across Nebraska Partners to support the implementation of the Technologies Across Nebraska Action Plan, including the following action steps:

- Inventorying what activities TAN partners are planning regarding information technology development in the next year.
- Identifying gaps in the information and resources that are available to assist communities.
- Setting up regional support teams and regional meetings of IT committees.
- Developing and maintaining an e-mail discussion facilitate the exchange of information among resource providers and members of community IT committees.
- Piloting toolkit materials by working with at least 10 communities to develop community or regional IT plans.

Lead: Technologies Across Nebraska and Community Council

Timeframe: June, 2002- May, 2003

Action Item CC 2

Title: Telelehealth Vision and Strategy

Description: Work with the NITC and other stakeholders to develop a vision and strategy for expanded use of telehealth.

Lead: Telehealth Subcommittee and NITC

Timeframe: June, 2002- December 2002

Action Item CC 3

Title: Local Government Toolkit Resources

Description: Identifying and developing toolkit resources for local governments, including sample IT plans, sample inter-local agreements, best practices, and case studies.

Lead: Local Government and Libraries Subcommittee

Timeframe: January-May 2003

Education Council
of the
Nebraska Information Technology Commission

EC Priorities and Action Items for 2002-03

Priorities

The sector priorities of the Education Council of the Nebraska Information Technology Commission are to provide recommendations that support the:

EC-1: Provision of an infrastructure that will permit all citizens of Nebraska to have access to the same educational experiences, regardless of location.
EC-2: Identification and facilitation of diverse training opportunities;
EC-3: Ensurance of life cycle funding;
EC-4: Accommodation of learner needs;
EC-5: Coordination of statewide education I.T. efforts and resources, including collaboration with public and private entities;
EC-6: Pursuit of leading edge technology applications to enhance teaching and learning.

Action Items

PRIORITY EC-1
Provision of an infrastructure that will permit all citizens of Nebraska to have access to the same educational experiences, regardless of location.

EC 1.1 (Continuation)
Title: Statewide Video Standard
Description: The Education Council will assist the Nebraska Network Workgroup with a migration path and cost analysis of video standards implementation for distance learning and teleconferencing as they complete the study of a statewide video system.
Lead: Volunteer Task Group and Network Architecture Work Group.
Timeframe: 3rd Quarter, 2002—4th Quarter, 2002

EC 1.2 (Continuation)
Title: Adequate Rural Bandwidth
Description: The Education Council will assist the Nebraska Network Workgroup with network and backbone design considerations in preparation for an aggregated purchase of all publicly funded telecommunications. The Education Council will support strategies that ensure that adequate bandwidth is being provided to the rural areas of the State so as to provide access to the same educational experiences, regardless of location. The Education Council will emphasize the needs of the rural areas, including IP-centric applications, during NETCOM transport

deployment and investigate application development that supports synchronous, asynchronous distance education as well as voice/video/data transfer.
Lead: Volunteer Task Group
Timeframe: 2nd Quarter, 2002—4th Quarter, 2002

PRIORITY EC-2
Identification and facilitation of diverse training opportunities;

EC 2.1 (New)
Title: Recommend Change in Funding for Technology Training Grants
Description: The Education Council, with the cooperation of the Training Advisory Work Group, will recommend a change in funding of the Technology Training Grants from the current Legislative level of $130,000 to a new funding level of $250,000 for Fiscal Year 2004-05, raising the grant maximum to $25,000 and placing the grant fund under the jurisdiction of the NITC with Education Council input. This would enable the Technology Training Fund to function and be managed in a manner similar to the Community Technology Fund and Government Technology Collaboration Fund.

The NETC Training Grant fund, originated in 1994, has remained constant at $130,000 with $10,000 grant maximums for the last eight years. The mini-grants have been used by dozens of institutions to train hundreds of teachers and instructors in various areas of telecommunications and educational technology. Over the past eight years, the level of technology used by teachers, students and administrators to access the Internet and perform distance learning has increased many times. Since 1994, the cost of providing technology training has increased substantially, dwarfing the original training value of $10,000. The Education Council sees this fund as vital to the ongoing improvement of Nebraska education by providing much-needed training funds for faculty all across the state in K-12 and Higher Education institutions.

Lead: Training Advisory Work Group
Timeframe: 3rd Quarter, 2002—2nd Quarter, 2003

PRIORITY EC-3
Ensurance of life cycle funding;

EC 3.1 (New)
Title: Life cycle funding strategies and Total Cost of Ownership materials
Description: The Education Council will assist K-12 and higher education institutions and funding agencies with specific life cycle funding strategies and provide them with Total Cost of Ownership materials in order to achieve the desired level of service.
Lead: Volunteer Task Group
Timeframe: 3rd Quarter, 2002--2nd Quarter, 2003

PRIORITY EC-4
Accommodation of learner needs;

EC 4.1(Revised)
Title: Role of Technology in Standards

Description: The Education Council will recommend the appropriate role for technology, essential learnings, competencies, and proficiencies in statewide academic standards, certification and re-certification.
Lead: Training Advisory Work Group or Volunteer Task Group
Timeframe: 3rd Quarter, 2002 – ongoing

EC 4.2 (New)
Title: Educational Technology Proficiency Measures for Students, Teachers, and Administrators
Description: The Education Council will encourage the implementation of technology proficiency measures for students, teachers, and administrators across the State of Nebraska.
Lead: Volunteer Task Group
Timeframe: 3rd Quarter, 2002—ongoing

PRIORITY EC-5
Coordination of statewide education I.T. efforts and resources, including collaboration with public and private entities;

No additional activity was identified for this priority in this performance year.

PRIORITY EC-6
Pursuit of leading edge technology applications to enhance teaching and learning.

EC 6.1(Revised)
Title: Synchronous and Asynchronous Instructional Methods
Description: The Education Council will encourage the development of new instructional methods and resources for synchronous and asynchronous instruction and guidelines for their appropriate use.
Lead: Training Advisory Work Group or Appointed Task Group
Timeframe: 2nd Quarter, 2002 – 2nd Quarter, 2003

The current slate of action items was discussed and recommended by the Education Council on May 17, 2002 and will be considered by the NITC on June 18, 2002 for insertion into "Section 2 – Council Priorities and Action Items" of the Statewide Technology Plan.

State Government Council
Of the
Nebraska Information Technology Commission

SGC Priorities and Action Items for 2002-2003

Priorities

The sector priorities of the State Government Council of the Nebraska Information Technology Commission are to provide recommendations that support:

- SGC-1 Implementing e-government to provide for a cost effective, efficient delivery of services while maintaining necessary security and confidentiality of non-public information.
- SGC-2 Improving collaboration and efficiency through technical standards, guidelines, and enterprise solutions.
- SGC-3 Provide a planning and implementation process for IT projects which avoids unnecessary delay and bureaucracy.
- SGC-4 Implementing appropriate policies for information technology related security and privacy.

Action Items

PRIORITY SGC-1
Implementing e-government to provide for a cost effective, efficient delivery of services while maintaining necessary security and confidentiality of non-public information.

SGC 1.1
Title: **E-Government to Business Initiative**
Description: The NITC adopted the e-government strategic plan in November 2000. Governor Johanns endorsed the strategic plan and directed that an initial focus be placed on the interaction between government and businesses. The Business Portal Action Plan was developed to guide that effort. This action item will involve the continued implementation of that plan. (A copy is available at: http://www.nitc.state.ne.us/sgc/ and includes a complete list of short and long term action items.)
Lead: Office of the CIO
Timeframe:

Completed	Phase I: Creating a portal and inventory of business forms.
Beginning 2nd Quarter 2002	Phase II: Includes training sessions for development professionals and businesses in using the business portal; implementation of a maintenance plan for keeping the portal's business forms inventory current and accurate; and continuation of an aggressive strategy to automate government forms used by businesses.

Future	Complete remaining items in the Business Portal Action Plan, including increased integration across agencies and levels of government.

SGC 1.2
Title: E-Government to Employee Initiative
Description*:* Develop and implement an action plan to provide an employee portal for state government employees. The portal will provide access to employee related information and services such as: the NIS system; state directory; pay stub application; TSB vehicle reservation system; retirement accounts; IMServices Help Desk; and newsletters (Statehouse Observer, Affirmative Action Newsletter, etc.).
Lead: Work group to be created
Timeframe: Beginning 3rd Quarter 2002

SGC 1.3
Title: E-Government to Citizens Initiative
Description: Building on the Business Portal, develop and implement an action plan to provide an enhanced portal for citizens. The portal should provide easier access to existing information and services; as well as, provide new e-government services.
Lead: Work group to be created
Timeframe: Beginning 4th Quarter 2002

PRIORITY SGC-2
Improving collaboration and efficiency through technical standards, guidelines, and enterprise solutions.

ACTION ITEM SGC 2.1
Title: Recommend technical standards, guidelines, and enterprise solutions
Description: The SGC will recommend technical standards, guidelines, and enterprise solutions for state government. The SGC will work with the Technical Panel to develop these standards and guidelines.
Lead: Work group(s) to be created.
Timeframe:

July 2002 through July 2003	Recommend technical standards, guidelines, or enterprise solutions for: - E-mail Standard (revise) - Secure E-mail Standard (see SGC 4.1) - E-fax - Content Management - Document Management and Records Retention (see SGC 4.2) - Server Farm - Electronic Forms Automation
Ongoing	Others as identified

PRIORITY SGC-3
Provide a planning and implementation process for IT projects which avoids unnecessary delay and bureaucracy.

SGC 3.1
Title: Improved Planning Process
Description: Continue to improve the information technology planning process for state agencies. The SGC will review, and revise as appropriate, the planning documents utilized by agencies, including: agency comprehensive information technology plans and agency project proposal forms for budget requests. The review will include recommendations for improving the cost-benefit analysis information provided with project proposals.
Lead: Office of the CIO
Timeframe: 2nd Quarter 2003 - Review and revise planning documents as needed.

SGC 3.2
Title: Improved Project Management
Description: The SGC will continue to provide guidance to agencies on best practices for project management. Areas of focus should include: management of IT related projects; measuring results; preparing project closure reports; and recommendations for a certification process for project managers.
Lead: Office of the CIO
Timeframe: 2nd Quarter 2003 - Review and revise project management documents as needed.

SGC 3.3
Title: Communication with Policymakers
Description: Improve communications with policymakers in both the Legislative and Executive branches. This action will include providing briefings to the chairs of the NITC oversight committees (Appropriations Committee and Transportation and Telecommunications Committee) on issues raised by the State Government Council.
Lead: Office of the CIO
Timeframe: Ongoing

PRIORITY SGC-4
Implementing appropriate policies for information technology related security and privacy.

SGC 4.1
Title: Security Policies
Description: In January 2001, the NITC adopted the security policies developed by the Technical Panel's Security Architecture Work Group. These policies, guidelines, and best practices are intended to provide a framework for a secure computing environment, with a focus on state government. The SGC, in coordination with the Technical Panel, will work to implement these policies in state government. Areas to be addressed include: training; agency level planning; business continuity planning; and security assessments.
Lead: To be determined
Timeframe:

July 2002 through July 2003	- Secure e-mail standard to be recommended - Review and make recommendations for

	"authentication" standards, guidelines, or best practices

SGC 4.2
Title: Records Retention Project
Description: Working with the Records Management Division, develop technical solutions for records retention.
Lead: To be determined
Timeframe: 3rd and 4th Quarters 2002

Technical Panel
Of the
Nebraska Information Technology Commission

Technical Panel Priorities and Action Items for 2002-2003

Priorities

TP-1 Support the development of a robust statewide telecommunications infrastructure that is scalable, reliable and efficient.

TP-2 Develop a technical architecture, including recommended standards and guidelines, to provide for interoperability and greater efficiency in IT systems.

TP-3 Review technology projects or requests for funding recommended to the NITC, including budget requests, NITC grant requests, and Information Technology Infrastructure Fund projects.

Action Items

PRIORITY TP-1
Support the development of a robust statewide telecommunications infrastructure that is scalable, reliable and efficient.

TP 1.1
Title: Provide Technical Support to the NETCOM Project.
Description: The panel will provide technical support for the implementation of the NETCOM Project.
Lead: Brenda Decker, Network Architecture Work Group
Timeframe: NETCOM - Ongoing

TP 1.2
Title: Nebraska Telecommunications Infrastructure Security Review
Description: Working with the state Homeland Security team, examine security issues regarding the state's telecommunications infrastructure.
Lead: Steve Schafer
Timeframe: Ongoing

TP 1.3
Title: Identify Types and Levels of Service
Description: The panel will identify types and levels of telecommunication services that different sectors (including business, health care, and education) require. In cooperation with the Public Service Commission and service providers, the panel will investigate ways to document the availability of different telecommunication services by geographic area.
Lead: Brenda Decker
Timeframe: Ongoing

PRIORITY TP-2
Develop a technical architecture, including recommended standards and guidelines, to provide for interoperability and greater efficiency in IT systems.

TP 2.1
Title: Recommend Technical Standards, Guidelines, and Best Practices
Description: The panel, with input from the NITC councils and other coordinating entities, will recommend the adoption of technical standards, guidelines, and best practices.
Lead: To be determined.
Timeframe: To be determined.

TP 2.2
Title: Technical Support for Aggregation and Coordination of Networks
Description: The panel will provide technical support for the aggregation and coordination of networks, including the Nebraska Network Workgroup. The panel will also create an application implementation workgroup to further this action item.
Lead: Steve Schafer
Timeframe: Ongoing

TP 2.3
Title: Implementation of Critical Elements of the Technical Architecture
Description: The panel will identify "critical elements" of the technical architecture and recommend an enterprise approach for implementation of each.
Lead: Walter Weir
Timeframe: 3rd Quarter 2002 - 2nd Quarter 2003

PRIORITY TP-3
Review technology projects or requests for funding recommended to the NITC, including budget requests, NITC grant requests, and Information Technology Infrastructure Fund projects.

TP 3.1
Title: Project Reviews - Statutory
Description: Provide a technical review of project proposals as required by statute. Categories of projects that must be reviewed by the panel are: budget requests; GTCF grant fund applications; CTF grant fund applications; and ITIF funded projects. Certain long-term projects, such as NIS and NETCOM, are also reviewed periodically during the project implementation.
Lead: Rick Becker
Timeframe: Budget requests: September - November 2002
GTCF and CTF grants: As received
ITIF funded projects: Prior to authorization of use of funds
Long-term projects: Ongoing
Education Innovation Fund Grants: Annual

TP 3.2
Title: Project Reviews - Other

Description: The panel will review projects not listed in 3.1 above at the request of the NITC, the project sponsor, or other responsible party.
Lead: Rick Becker
Timeframe: State Records Board grants: Quarterly
Voluntary reviews: As requested

TP 3.3
Title: Revise Procedures for Reviewing IT Projects and Purchases by State Agencies
Description: The panel will recommend revisions to the technical review procedures for IT related projects and purchases by state agencies. The purpose of the review process is to ensure compliance with technical standards, compatibility with existing or planned infrastructure, and sound decisions. The revised review process will be designed with the following considerations: 1) the process will incorporate all existing review procedures (e.g. the DAS 1909 form) to provide agencies with a one-step process; 2) the process for submitting requests will not be cumbersome; and 3) the review process will allow for a rapid response to the requesting agency.
Lead: DAS IT Sub-cabinet
Timeframe: 3rd Quarter 2002

Section 3

Technical Infrastructure

Section 3

Technical Infrastructure

Overview

State statute directs the NITC to undertake several steps to coordinate and improve the state's technical infrastructure. According to Sections 86-1501 through 86-1514, the NITC must accomplish the following tasks:

- Develop a statewide vision and strategic plan to guide investments in information technology;
- Improve the planning, budgeting, and management of state government's information resources;
- Support the development of a unified statewide telecommunications infrastructure that is scalable, reliable, and efficient; and
- Organize technology planning in new ways to aggregate demand, reduce costs, and create support networks.

The NITC uses four approaches to coordinate and develop the state's technical infrastructure. Through the work of the Technical Panel, the NITC is defining a **technical architecture.** The technical architecture guides decisions about hardware, software, and networks in order to achieve interoperability, data sharing, flexible systems, and control costs. Where necessary, the NITC adopts **standards and guidelines** pertaining to specific aspects of the technical architecture. The process for developing standards and guidelines emphasizes communication and broad participation. Pursuant to state statute, the NITC conducts **technical reviews** of selected projects. Finally, the NITC undertakes **special projects** to achieve its goals.

This section of the Statewide Technology Plan lays the foundation for all NITC-sponsored activity pertaining to the state's technical infrastructure. Detailed information about the state's technical architecture and standards and guidelines is available on the NITC web site at: http://www.nitc.state.ne.us/standards/index.html.

The NITC web site (http://www.nitc.state.ne.us/) also has more information about special projects that are underway.

Technical Architecture

Purpose and Goals

An "enterprise architecture framework" refers to a conceptual structure for guiding decisions on the exchange of information and utilization of shared information technology resources. The framework includes, but is not limited to networks, computer platforms, applications, and enterprise-specific data. The business case for developing this architecture rests on six goals for information systems:

- **Provide access to data in a useful format when and where it is needed;**
- **Insure accurate and consistent data;**
- **Share data across the organization;**
- **Improve ability to adapt to changing business needs;**
- **Provide security; and**
- **Contain costs.**

Objectives

The objectives of this undertaking are to:

- Establish guidelines and standards for the use of information technology in the State of Nebraska, when standards are needed to support statewide activities, including but not limited to accessibility, communications networks, e-government, and security.;
- Assist communities of interest in developing standards that are necessary to integrate data and applications across jurisdictions;
- Develop guidelines that enhance information technology investment and purchasing activities.

General Principles

The Technical Panel and NITC shall observe the following principles when recommending and adopting standards and guidelines for a state enterprise architecture framework. The architecture should:

- Facilitate the goals and objectives of the Statewide Technology Plan (Section 1);
- Support the use of information technology to improve efficiency and effectiveness of all sectors;
- Increase access to information and services for citizens, business, and government, and all sectors, while protecting privacy and security considerations;
- Enable affected entities to leverage existing technology infrastructure investment;
- Use advances in technology that are scalable, reliable and cost-effective; and
- Provide for identification or creation of clear lines of authority and responsibility for all processes and technical decisions.

Affected agencies should be allowed reasonable access to the process of developing standards and guidelines. Affected agencies should have a reasonable time to implement applicable standards and guidelines.

The NITC, in concert with affected entities, will weigh the benefits of a standard or guideline against the cost of implementation.

Development

The Technical Panel of the NITC will undertake a periodic review of the current architecture. The review will identify problems as well as strengths. In cooperation with the Councils of the NITC, the Technical Panel will identify the important business drivers that will determine the adequacy of the architecture in the future. The Technical Panel may sponsor studies of specific components and issues pertaining to the architecture. Based on this information, the Technical Panel will develop a state enterprise architecture framework which:

- Categorizes the architecture into useful components;
- Defines the scope of each component;

- Establishes principles to guide the development of each component of the architecture.

The Technical Panel shall recommend technical standards and guidelines to assist implementation of the architecture. The Technical Panel shall recommend policies and strategies to support the transition from the current to the target architecture.

The architecture framework should reflect the unique requirements of different sectors of the state. Preparing the framework should reflect a collaborative effort. A state enterprise architecture framework should not impede the rapid deployment of appropriate technology or establish cumbersome regulations or bureaucracy.

Given the complexity, scope, and changing nature of technology at the statewide level, developing the state enterprise architecture framework must follow an incremental approach that focuses on functional groups with shared interests. The framework should address the goals of access, accuracy, adaptability, cost containment, data sharing and security.

Defining the Scope of the Enterprise

Since information sharing is a fundamental purpose of enterprise architecture, the term "enterprise" should include all areas that need to share **substantial** amounts of information. (Steven Spewak, 1995) A scope that is too narrow will miss important details and fall short of achieving the goals of the enterprise architecture. A scope that is too broad will take too much time to develop and will become unmanageable.

To be successful, enterprise architecture must incorporate policy, control, implementation, and management functions. (NASCIO Enterprise Architecture Toolkit, v.1.0, 2001)

Defining the enterprise architecture is a significant challenge for the NITC, because the potential scope includes state agencies, local government, K-12 education, higher education, and even other entities. This is far too broad to be successful, except for limited areas. In addition, the NITC can only set policy. Control, implementation, and management are other essential components of a complete governance model for enterprise architecture. These are outside the authority of the NITC.

Solving this dilemma requires a hybrid approach to enterprise architecture. The solution includes the following elements:

1. NITC guidelines should encourage enterprise architectures for organizational units, such as state government, local government entities, and higher educational institutions. The guidelines should consider a common approach and templates, such as those under development by the National Association of Chief Information Officers (NASCIO). The enterprise architecture of each organizational unit should explicitly address data sharing requirements and interoperability with statewide systems.
2. The NITC should encourage communities of interest to develop standards and guidelines that will promote data sharing and insure interoperability. Examples of communities of interest include the Nebraska Geographic Information Systems Steering Committee, the Nebraska Criminal Justice Information Systems Advisory Committee, and distance education networks. The NITC Technical Panel should help organize, review and coordinate these efforts.
3. The NITC Technical Panel will develop elements of the enterprise architecture, including standards and guidelines, on topics that transcend organizational units or individual communities of interest. Examples include accessibility requirements and security policies and procedures. The Technical Panel will investigate tools for better data management and data sharing.
4. The NITC Technical Panel will recommend procedures for evaluating major investments in the technical infrastructure. The procedures should address the business case, life cycle cost analysis, alternatives, compatibility with other elements of the technical architecture, and risk assessment.
5. The NITC should provide a clearinghouse to document the technical architecture, including standards and guidelines.

Process for preparing, reviewing, and updating standards and guidelines

Authority

"The Commission shall: … adopt minimum technical standards, guidelines, and architectures upon recommendation by the technical panel …" Neb. Rev. Stat. Section 86-1506(6)

"… The technical panel may recommend technical standards and guidelines to be considered for adoption by the Commission." Neb Rev. Stat. Section 86-1511(2)

Definitions

Standard: A degree or level of requirement that all jurisdictions should use, which would be enforceable by duly authorized entities. With any standard, there will be circumstances that merit exceptions.

Guideline: A statement of general policy or procedure by which to determine a course of action, subject to reasonable situations. Adherence is voluntary.

Overview

Adhering to a sound set of standards for information technology can reduce costs and improve service delivery. Statute requires the Technical Panel to recommend standards and guidelines to the NITC for adoption. Enforcement of NITC standards and guidelines depends entirely upon cooperation of other entities with such authority.

These procedures permit both the NITC Technical Panel and users to propose standards and guidelines. By statute, the Technical Panel may recommend technical standards and guidelines to the NITC. In addition, any state agency, political subdivision, educational institution, or other information systems user in Nebraska may propose standards or guidelines for information technology. The technical panel will review the proposal and then invite comments from other information technology coordinating bodies, other government agencies, and the public.

Principles

The Technical Panel and NITC shall observe the following principles when recommending and adopting standards and guidelines:

- Data are shared, consistent with security and confidentiality requirements.
- The infrastructure uses advances in technology that are scalable, reliable and cost-effective.
- Design and development of the statewide infrastructure are collaborative.
- The telecommunications infrastructure is based upon open-systems concepts to assure universal access and interoperability.
- Affected entities should have a reasonable time to implement a standard or guideline.
- The NITC should weigh the benefits of a standard or guideline against the cost of implementation.

Format

The format of a standard or guideline shall include the sections listed below. Eventually, a form will be available for this purpose to facilitate the process of proposing and reviewing standards and guidelines.

1. Title and number
2. Date of first adoption
3. Date of last revision
4. Date of scheduled review
5. Status (draft, pending, active, inactive, standard or guideline)
6. Applicability (who it pertains to)
7. Category
8. Description of impact
9. Related Standards
10. Rationale and justification
11. Primary NITC principle addressed

Process

The Technical Panel will solicit initial standards and guidelines from NITC Councils, other coordinating entities, and state and local agencies. The invitation will include a timeframe for receiving notices and making recommendations to the NITC. After the initial round of standards and guidelines, a sponsor may propose a standard or guideline to the Technical Panel for consideration. Proposals should be e-mailed. Sponsors should describe the standard, its applicability, impact, related standards, and provide other justification.

The Technical Panel will review the proposed standard or guideline and determine whether to proceed with further consideration. The Technical Panel may request further information from the sponsor or make changes to the proposal. The Technical Panel will announce and post the proposed guidance on the World Wide Web for review by affected entities for at least 30 days. Comments should be submitted by e-mail to info@cio.state.ne.us. The Technical Panel may appoint special review committees to examine the proposal and make recommendations.

The Technical Panel will review the proposal and any comments received. The review will include an evaluation of the proposal's alignment with the NITC Statewide Technology Plan.

The Technical Panel may make further changes or recommend the proposal to the NITC for adoption. If changes are substantive, in nature, the Technical Panel shall provide another 30-day opportunity for comment.

The NITC may adopt, change, or reject any proposed standard or guideline.

Technical Review Process

Section 86-1511 (2) requires the Technical Panel to "… review any technology project or request for additional funding recommended to the Nebraska Information Technology Commission…." Sections 86-1512 and 86-1513 require the Technical Panel to review requests for funds from the Community Technology Fund and the Government Technology Collaboration Fund. Section 9-812 requires the Technical Panel to review funding requests for educational technology assistance grants (lottery funds). In addition, the Technical Panel will conduct special reviews on request by project sponsors, the Governor, the Legislature, or other entities exercising oversight responsibilities.

The review process will evaluate and rank the adequacy of each component of the project plan. The Technical Panel will identify issues pertaining to implementation, technical impact, and risk assessment. The Technical Panel will look for duplication, opportunities for collaboration and compatibility with other systems.

It is neither practical nor necessary for the Technical Panel to review all information technology projects that an agency or other jurisdiction undertakes. One purpose of the review process is to assist the budget process in reviewing and ranking appropriation requests. Statue requires the Technical Panel to review requests for "new or additional funding." The NITC has issued instructions to guide agencies on what constitutes "new or additional funding." The guidance document is available on the NITC web site at: http://www.nitc.state.ne.us/forms/.

Another purpose of the review process is to promote consistency with the Statewide Technology Plan. Other than reviews mandated by statute, the NITC and Technical Panel must rely on agencies and other jurisdictions to identify and submit for review any projects that would have either a significant positive or negative impact on the Statewide Technology Plan.

The review process can also provide technical assistance and advice to project sponsors. Agencies and other jurisdictions may submit any project to the Technical Panel for review.

Special Projects

The NITC has sponsored two planning efforts that target the need for a "unified statewide telecommunications infrastructure that is scalable, reliable and efficient." In 1998, the NITC recommended a study that would document the current and future telecommunications demand of public entities. The "Telecommunications Infrastructure Needs Assessment" (TINA) got underway in August 1999. It included interviews with almost 250 individuals, an inventory that was sent to over 400 entities, and 3 focus groups with 125 participants. The TINA study identified several objectives, including:

- Providing an information infrastructure to support governmental educational and economic development initiatives throughout the state;
- Leveraging the State's purchasing power to create economic development incentives; and
- Reducing telecommunications costs of state government;

The TINA study resulted in an RFP in August 2001, which sought a qualified entity to assume the position of "prime contractor" for implementation of a statewide telecommunications network. On October 19, 2001, the State rejected all proposals because they failed to meet key objectives. In February 2002, the NITC passed a resolution, which endorsed conducting a pilot project as a proof of concept. Further information about the TINA study and related activities is available at:
http://www.doc.state.ne.us/netcom/index.html.

Another special project is the Nebraska Network Feasibility Study. At its February 2002 meeting, the NITC formed a workgroup to evaluate the feasibility of developing a digital network and related support functions that would serve education, communities, and state government. The workgroup will present a final report and recommendations to the NITC by September 2002. Further information is available at:
http://www.nitc.state.ne.us/nitc/network/.

Section 4

Planning and Project Management

Section 4

Planning and Project Management

Overview of Planning and Project Management Requirements

Information is a critical resource in government and many private sector activities. Virtually every government agency and many businesses spend substantial time and resources collecting, distributing, analyzing, transforming, and using information. In the past, manual procedures provided the only means for manipulating information. Today, automation and information technology represent powerful tools for maximizing the value of information. As a major resource and asset, information technology requires effective planning and management. In this respect, information technology has much in common with other types of assets, such as human resources, capital facilities, and financial resources. All require some degree of formal structure to promote effective use and management.

The NITC vision statement speaks to using information technology "to improve the quality of life of all Nebraskans." This vision, the NITC goals, and priorities of the NITC Councils and Technical Panel provide the context for the planning process. In addition, good planning and management should help to achieve certain principles for information technology. These include:

- Information technology must serve and respond to the mission, goals, and priorities of the sponsoring entity.
- Assessing and possibly redesigning the business process must precede decisions about applying a specific information technology solution.
- The planning and management process should treat information as a strategic resource that has value and should explore ways to maximize this value.
- Information belongs to the enterprise, and sponsoring entities should incorporate data sharing and the needs of other users in their plans, subject to privacy and confidentiality requirements.
- Information technology systems should be scalable, reliable, and efficient.

Section 86-1506 (5) directs the NITC to adopt guidelines regarding project planning and management. Section 86-1510 (5) requires the Chief Information Officer to "implement a strategic, tactical, and project planning process for non-education state government information technology that is linked to the budget process." Section 86-1510 (9) requires the Chief Information Officer to "monitor the status of major non-education state government technology projects." These planning and project management requirements apply to any "governmental entities, state agencies, and political subdivisions, which directly utilize state-appropriated funds for information technology purposes."

Section 86-1511 requires the Technical Panel to "review any technology project or request for additional funding recommended to the Nebraska Information Technology Commission." Section 86-1506 (8) requires the NITC to "… make recommendations to the Governor and Legislature, including a prioritized list of projects, reviewed by the technical panel, for which new or additional funding is requested."

This section of the Statewide Technology Plan presents procedures for the following activities:

- Agency Comprehensive Information Technology Plan
- Information Technology Budget Requests
- Information Technology Project Proposals
- Technical Review Process
- NITC Recommendations and Prioritization
- Information Technology Project Management and Implementation

Agency Comprehensive Information Technology Plans

Comprehensive information technology plans should document how an organization's use of information technology supports its goals, objectives and functions. The plans provide a baseline view of current systems and provide strategic direction for future investments in information technology. The level of detail should be sufficient to assist high-level decisions, but does not substitute for specific project plans used for budgeting. As public documents, comprehensive technology plans serve as a means for communicating with other agencies and organizations that may be affected.

The comprehensive technology plans serve the following purposes:

- Assist decision-making at the organizational and statewide levels;
- Create a structured planning process for information technology;
- Integrate agency information technology planning with the state's biennial budget process;
- Catalog the state's information technology assets;
- Provide a clearinghouse of plans to encourage sharing of best planning practices; and
- Promote compatibility between an organization's strategic direction for information technology and the NITC's Statewide Technology Plan.

Required

All state agencies and public higher education institutions requesting state appropriations for information technology should prepare a comprehensive information technology plan.

Recommended

Political subdivisions and major public service organizations should prepare a comprehensive technology plan to guide internal decisions and to encourage collaboration with other organizations.

Procedures for Submission

Agency Comprehensive Information Technology Plans are due by April 1 of even-numbered years.

The Comprehensive Information Technology Plan form is available on the NITC Web site (http://www.nitc.state.ne.us/forms/). Any agency that does not have Internet access can obtain copies of the form by contacting the Office of the CIO at:

Office of the CIO
521 South 14th Street, Suite 200
Lincoln, Nebraska 68508
(402) 471-3560

The plan should be submitted in one of the following ways:

- The preferred method for submitting the plan is through the use of the submitting agency's Web site. If possible, the submitting agency should post their Comprehensive Information Technology Plan to their agency's Web site. The agency should then provide the Office of the CIO with the URL, which corresponds to the plan by sending e-mail with the relevant information to info@cio.state.ne.us.
- The plan may also be submitted as an e-mail attachment to info@cio.state.ne.us. The e-mail message should include the name of the submitting agency and contact information for the individual submitting the documents.
- Completed forms may also be provided to the Office of the CIO on a standard 3.5" diskette or CD-ROM.
- If an agency is unable to submit files in any of the methods above, contact the Office of the CIO to make other arrangements.

Review of Plans

NITC staff will review the technology plans of state agencies and public higher education institutions for completeness and to prepare summaries for the NITC and its councils. The Technical Panel may review comprehensive technology plans on a selective basis. NITC staff will forward any comments to the submitting agency or institution.

Relationship to the Budget Request

The comprehensive technology plan provides part of the context for evaluating an agency's budget request for information technology. The comprehensive information technology plan is not subject to NITC approval, although staff and the Technical Panel will review the plans and offer comments and suggestions.

Agency Information Technology Budget Requests

State agencies must submit information relating to expenditures and funding requests relating to information technology as part of the biennial budget request cycle and interim budget requests. Specific directions are included with the State of Nebraska Budget Instructions. Major aspects of the budget request for information technology include:

- Personnel who provide or support information technology
- On-going operational costs
- One-time project costs
- Narrative justification, including life-cycle costs and performance indicators

The budget request document will no longer include narrative information that belongs in the agency's comprehensive information technology plan or project plans. Instead, the budget request will focus on linking information technology costs to different programs and other categories. Performance indicators will enable policy makers to establish a better understanding of the value of technology to each agency's mission and goals.

Required

All state agencies and public higher education institutions requesting state appropriations for information technology must submit budget request data for information technology expenditures as part of the state's budget request process.

Recommended

Political subdivisions and major public service organizations should adopt budget procedures for information technology that serve the needs of their respective governing entities.

Procedures for Submission

The State Budget Division will provide an automated system for preparing information technology budget requests. NITC staff

will prepare summaries of information technology expenditures and requests for the NITC and the NITC Councils. NITC staff will assist the State Budget Division and Legislative Fiscal Office with reviewing information technology expenditures and requests.

Agency Information Technology Project Proposals

Project proposals provide detailed information about the purpose, scope, justification, and implementation of new projects and major changes to existing systems. Agencies should prepare a project proposal for all projects requiring new or additional funding. The degree of detail in each plan should correspond to the magnitude of the project. Major components of each project proposal are listed below:

- General Information
- Executive Summary
- Goals and Objectives
- Scope and Projected Outcomes
- Project Justification / Business Case
- Implementation
- Technical Impact
- Risk Assessment
- Financial Analysis and Budget

Required

All state agencies and public higher education institutions requesting state appropriations for information technology must prepare a project proposal for each information technology project. An information technology project is defined as a specific series of activities involving the implementation of new or enhanced IT systems for the sponsoring agency. A project proposal is required whenever new or additional state appropriations (regardless of fund type) are required for implementation. Project proposals should also be prepared for requests for funding from the Community Technology Fund, the Government Technology Collaboration Fund, Education Technology Assistance Grants, and the School Technology Fund.

Procedures for Submission

State agencies and public higher education institutions must submit their information technology project proposals to the NITC at the same time that biennial budget request documents are due.

The Project Proposal Form and Assessment Document can be found on the NITC Web site (http://www.nitc.state.ne.us/forms/). Any agency that does not have Internet access can obtain copies of the templates and forms by contacting the Office of the CIO at:

Office of the CIO
521 South 14th Street, Suite 200
Lincoln, Nebraska 68508
(402) 471-3560

Project proposal forms should be submitted in one of the following ways:

- The preferred method for submitting the project proposal forms is through the use of the submitting agency's Web site. If possible, the submitting agency should post their project proposal forms to their agency's Web site. The agency should then provide the Office of the CIO with the URL, which corresponds to the forms by sending e-mail with the relevant information to info@cio.state.ne.us.
- The forms may also be submitted as an e-mail attachment to info@cio.state.ne.us. The e-mail message should include the name of the submitting agency and contact information for the individual submitting the documents.
- Completed forms may also be provided to the Office of the CIO on a standard 3.5" diskette or CD-ROM.
- If an agency is unable to submit files in any of the methods above, contact the Office of the CIO to make other arrangements.

Review of Project Proposal Forms

NITC staff will review project proposals for completeness and to prepare summaries for the NITC, the Technical Panel, and the NITC councils. NITC staff will assist the NITC and its councils with the review and prioritization process set forth below. NITC staff will forward any comments to the sponsoring agency or institution.

The NITC Technical Panel will conduct a formal review of projects that fall into one or more of the following categories:

- New or additional state funding (appropriation request)

- Community Technology Fund and Government Technology Collaboration Fund
- Education Technology Assistance Grants or School Technology Fund
- Special requests by the sponsoring agency, governing board, the Governor, Legislature, or the NITC

Technical Review Process

Section 86-1511 (2) requires the Technical Panel to "… review any technology project or request for additional funding recommended to the Nebraska Information Technology Commission…." Sections 86-1512 and 86-1513 require the Technical Panel to review requests for funds from the Community Technology Fund and the Government Technology Collaboration Fund. Section 9-812 requires the Technical Panel to review funding requests for educational technology assistance grants (lottery funds). In addition, the Technical Panel will conduct special reviews on request by project sponsors, the Governor, the Legislature, or other entities exercising oversight responsibilities.

The review process will evaluate and rank the adequacy of each component of the project plan. The Technical Panel will identify issues pertaining to implementation, technical impact, and risk assessment. The Technical Panel will look for duplication, opportunities for collaboration and compatibility with other systems.

It is neither practical nor necessary for the Technical Panel to review all information technology projects that an agency or other jurisdiction undertakes. One purpose of the review process is to assist the budget process in reviewing and ranking appropriation requests. Statue requires the Technical Panel to review requests for "additional funding." Given the undefined meaning of this term, the NITC and Technical Panel will rely on the State Budget Division and Legislative Fiscal Office for assistance in determining what information technology projects represent "additional funding."

Another purpose of the review process is to promote consistency with the Statewide Technology Plan. Other than reviews mandated by statute, the NITC and Technical Panel must rely on agencies and other jurisdictions to identify and submit for review any projects that would have either a significant positive or negative impact on the Statewide Technology Plan.

The review process can also provide technical assistance and advice to project sponsors. Agencies and other jurisdictions may submit any project to the Technical Panel for review.

NITC Recommendations and Prioritization

Section 86-1506 requires the NITC to "… make recommendations to the Governor and Legislature, including a prioritized list of projects, reviewed by the technical panel, for which new or additional funding is requested." The NITC will use a three-step process in evaluating information technology projects and assigning each a unique priority ranking. The process will rely on information provided in the agency information technology project proposals described above.

Technical Panel review and recommendations

Using an assessment tool, the Technical Panel will score the technical aspects of the project proposals, including the sections on implementation, technical impact, financial analysis, and risk assessment. Although the Technical Panel must have information about all aspects of a proposed project, the panel's review will focus on questions impacting the potential success of the project rather than its programmatic merit or justification.

Council reviews and recommendations

The NITC councils will evaluate the objectives and justification for each project. Based on these evaluations and the technical assessment, each council will prepare a prioritized list of recommended projects for its sector.

NITC prioritization

The NITC will prepare a combined list of prioritized projects.

The assessment document used to score project proposals can be found on the NITC Web site (http://www.nitc.state.ne.us/forms/).

Project Management Guidelines

Overview

Section 86-1506 (5) directs the NITC to adopt guidelines regarding project planning and management. The goal of project management is to achieve the objectives of the project on time and within budget. Project management should define the responsibilities of project sponsors, and provide for adequate monitoring and reporting to the appropriate managers of the sponsoring entity and policy makers. It should allow a means to document benefits, monitor the scope and completion of projects, and compare costs.

The size and complexity of a project will determine the approach and structure required for good project management. Small projects may require only informal procedures. Large projects may require professional project managers and a formalized project management methodology.

Project management is essential for projects that present unusual or high risks. These risks may include:

- Technical (such as new technologies to the state or the sponsoring entity),
- Work processes (such as new functions or different ways of performing functions),
- Organizational (such as dealing with multiple organizational entities),
- Legal, contractual, regulatory, or
- Other (such as system size, funding limitations, project duration, timetable flexibility, technical or business complexity, implementation challenges, importance to the operation of the organization, or interrelations with other systems).

The NITC intends to develop standards and guidelines regarding project planning and management that are supported by the Project Management Institute (PMI) through the Project Management Body of Knowledge (PMBOK). PMI is the leading nonprofit professional association in the area of project management. PMI establishes project management standards and

provides seminars, educational programs and professional certification to the project management profession. The PMBOK is an inclusive term that describes the sum of knowledge within the profession of project management.

The PMBOK describes a project as a temporary endeavor undertaken to create a unique product or service. Types of information technology projects may include feasibility studies, research efforts, information technology strategic or other planning initiatives, system implementation, or development projects.

These general procedures for project management and implementation include three components:

- Project charter (to summarize expectations and responsibilities)
- Project implementation plan (to provide the detailed analyses that guide the project from beginning to conclusion)
- Project tracking and reporting (to communicate the progress of the project compared to expectations)

Applicability

All state agencies and public higher education institutions using state appropriations for information technology should adopt project management and implementation procedures, such as those presented in this guideline. All political subdivisions and major public service organizations should adopt similar policies to guide project management and implementation.

State-funded entities should follow these or similar project management guidelines for major projects and projects that have statewide strategic importance.

A "major project" includes projects that would have a significant effect on a core business function of the sponsoring organization. In addition, any project that would incur total cumulative expenditures of $250,000 or more should be considered a major project.

A "statewide strategic project" affects multiple government programs or departments. These projects may involve interfaces with other applications, provide data to or receive information

from other applications or government programs or organizations. Statewide strategic projects may impact state and local governments, private industry, citizens, or state employees beyond the sponsoring agency within a department or beyond the responsible department. Statewide strategic projects impact the state and its citizens from an enterprise perspective that is broader than the sponsoring organization.

Instructions

Project Charter

The project charter is the primary document that sets expectations for the project among the stakeholders. The responsible manager within the sponsoring entity should commit to the completion of the project within the parameters of the project charter. The charter will set forth the project scope, schedule, budget, and benefits. The project charter also:

- Identifies the project sponsor, project manager, and responsibility for project success;
- Sets baselines to assess progress;
- Documents assumptions which must hold true for the project to satisfy expectations; and
- Provides a means to modify project expectations and deliverables, if changes occur.

The contents of the project charter should include:

- **Project Description.** Include a brief description of the purpose of the project in non-technical terms.
- **Project Scope and Objectives.** Include one or two paragraphs defining the project scope and objectives in terms of the specific business functions the project will support. Refer to an expanded definition of project scope in the supporting material, if necessary.
- **Schedule**. Set deadlines for project deliverables. Define when the project starts and the projected completion date. Document major milestones that should be finished at certain dates.
- **Staffing.** Identify what skill sets are required on the project and who is responsible for specific activities.

- **Total Development Cost.** Include the current total development cost estimate for the project from the initial project plan or as revised in the project implementation plan. Include a summary of staffing requirements and costs.
- **Total Net Cash Flow.** Provide the cash flow of the project for the entire life cycle.
- **Funding Source.** Document the source of funds and indicate any contingencies.
- **Summary of Benefits.** Include a brief list of tangible and intangible benefits for the project. Refer to an expanded presentation of project benefits in the supporting material, if necessary.
- **Risks.** Identify major risks associated with the project and what action is anticipated to mitigate them.
- **Responsibilities.** Document the responsibilities and authority of the major participants, including the sponsor(s), project manager, and other persons who control different variables that affect the success of the project.
- **Signature Blocks for Approval**. Signatories are the agency head or appropriate manager within the sponsoring entity, project manager, and other stakeholders, if multiple units of government are involved.

Project Implementation Plan

Each project manager should develop, maintain, and follow a written plan that defines project goals, processes, and resource estimates (in terms of schedule, cost, and development). The implementation plan must be updated throughout the life of the project to accurately reflect the current plan. The implementation plan should review and update the original information technology project proposal that served as a decision document for funding. The implementation plan serves as supporting documentation for the project charter.

The project implementation plan should summarize the results of any detailed development planning, including the requirements definition, the general design, and feasibility study.

The project implementation plan should include a well-defined problem statement with well-defined business and technical requirements that assure the information technology solution satisfies the business need. Requirements must be thoroughly

documented and understood by the project team. Changes to requirements must be managed throughout the life of the project.

Risks associated with each information technology project should be identified, analyzed, and prioritized. Identified risks should be controlled through the processes of project planning and monitoring. Risk identification and management must be integrated components of project management and risks must be continuously assessed and analyzed during the life of the project.

Project Tracking and Reporting

Project managers should continuously track the progress of all projects against the project implementation plan. Project tracking involves monitoring and reviewing the project accomplishments and results against documented estimates contained in the implementation plan, and adjusting these estimates based on the actual accomplishments and results. Project tracking and reporting should serve the needs of:

- Project management
- Project sponsors
- Agency directors
- Policy makers

Close attention to basic control principles will improve the success of projects. Achieving this requires a disciplined approach to tracking project status, anticipating potential problems that may arise, and quick attention to resolve any problems. Project tracking and reporting should include the following minimum components, with a comparison between estimated and actual status for that time period.

- Changes to project sponsorship, management, or organization
- Project schedule and milestones (including changes to scheduled dates for key deliverables or milestones and planned completion date)
- Project budget (including cash flow and funding sources)
- Project scope, objectives, or requirements (if any changes occur)
- Summary of accomplishments since the last reporting period
- Summary of past, current and future issues (including steps to mitigate actual or potential problems and an updated risk analysis)

Project tracking methods and requirements will vary by project, based on the size, cost, complexity, and impact on the affected organizations. The management of a project includes processes for tracking and communicating project status and performing risk assessments. The formality of this tracking process may change, based on the specific project. The project manager has responsibility for tailoring all elements to meet the specific needs of the project. These same factors will affect the frequency of reporting, whether monthly, quarterly or less frequently. All projects should have a final report that summarizes final costs, issues, and lessons learned.

Summary of Planning Components and Applicability

Information Technology Planning Components	Description	Purpose	Primary Users	Timeline	Applicability		
					State Agencies	NITC Grants	Other Entities
Comprehensive IT Plan							
Comprehensive IT Plan	Agency level overview and strategic direction for the future	1) Guide internal agency planning process 2) Provide context for reviewing projects 3) Identify opportunities for collaboration 4) Identify enterprise-wide issues	1) Agencies 2) CIO 3) Tech. Panel	4/1/2002	Required	NA	Recommended
Biennial Budget Process							
Budget Request	Biennial budget request for information technology expenditures	1) Assist agency management of major resource 2) Document expenditures on information technology 3) Identify enterprise-wide issues	1) Agencies 2) Budget Off. 3) NITC/CIO 4) Policy makers	9/16/2002	Required	NA	NA
Project Proposals	Detailed explanation of objectives, scope and justification of specific projects for which new or additional funding is requested	1) Guide internal agency planning process 2) Document scope and benefits of project for policy makers 3) Provide basis for review and prioritization by NITC	1) Agencies 2) NITC 3) CIO 4) Policy makers	9/16/2002	Required for new and additional funding only	Required	Recommended
Technical Review	Review projects for technical soundness and consistency with Statewide Technology Plan	1) Evaluate technical soundness of projects 2) Determine whether projects are consistent with state plan	1) Agencies 2) NITC 3) CIO 4) Policy makers	10/15/2002	Required for new and additional funding only	Required	Optional *
Project Prioritization	Evaluation and prioritization of project proposals by the NITC and its Councils	1) Prioritize projects 2) NITC forwards prioritized list of projects to Governor and Legislature	1) NITC 2) CIO 3) Policy Makers	11/15/2002	Required for new and additional funding only	Required - NITC Awards Grants	NA
Project Management and Implementation							
Project Management and Implementation	Guidelines for project management, implementation, status reporting and monitoring.	1) Guide agency management of projects 2) Promote successful implementation 3) Document project status	1) Agencies 2) CIO 3) Policy makers	On-going	Recommended for all IT projects, including those which did not require new or additional funding	Recommended	Recommended

Technical reviews are optional for all other entities, except for projects receiving funds from the Education Innovation Fund and School Technology Fund. State Statute requires these projects to be reviewed by the Technical Panel of the NITC.

Section 5

Effectiveness Measures

Section 5

Effectiveness Measures

Overview

The overall purpose of the NITC is to set strategic direction in the area of information technology. This requires knowledge of where we are as well as where we want to be. Section 1 (Goals) sets forth a vision with supporting objectives and priorities. This section presents various ways to track the state's strength in its deployment and use of information technology. The scorecard includes various measures for communities, education, and government.

The NITC must also track its own effectiveness. This is accomplished in part through the choice of NITC objectives, Council priorities, and action plans that have measurable outcomes. To track progress, the Office of the CIO will prepare status reports on NITC-sponsored activities. These reports will be available on the NITC web site at: www.nitc.state.ne.us.

Below is a summary of NITC initiatives and accomplishments:

1. TINA / NETCOM. The NITC served as a catalyst by providing encouragement, funding, and facilitation at critical junctures of the TINA Study. The Technical Panel had an important role in developing and reviewing the RFP for aggregating services under a prime contractor. The Division of Communications has stated that it will not sign a contract with a prime contractor without NITC endorsement.

2. Nebraska Network Feasibility Study. In February 2002, the NITC established an ad hoc group to make recommendations regarding ways of providing digital networks and related support functions to serve education, communities, and state government. The feasibility study is intended to answer questions regarding the feasibility of greater coordination and collaboration in providing applications that use statewide networks serving public functions.

3. Budget Reviews and Prioritization. The review and prioritization process in 2000 was thorough, structured, and produced an integrated and numeric ranking of budget requests for information technology. Both the Budget Division and Legislative Fiscal Office used the NITC reviews and priorities as a point of departure for their own analyses. Efforts are underway to improve the process for 2002.

4. Information Technology Planning. The Statewide Technology Plan focused attention on the need to improve planning for information technology. This is reflected in agency technology comprehensive plans, project proposal forms, and

budget forms for information technology. The NITC can point to the following accomplishments stemming from this initiative:

- Agency comprehensive information technology plans for almost all agencies, which are available on the NITC web site;
- A summary of agency plans, also available on the NITC web site;
- Completion of the first Statewide GIS Strategic Plan in 2001;
- Update of the CJIS Strategic Plan in 2001;
- Widespread use of the project proposal form.

Efforts are underway to improve the process for 2002.

5. Project Management. The Statewide Technology Plan endorsed the Project Management Institute's Project Management Body of Knowledge (PMBOK). The first implementation was a requirement for selected projects to submit quarterly project status reports, using a standard format. Seven agencies reported on a total of 16 projects during the last fiscal year, representing 100% compliance. That number will increase to at least 18 projects in FY 2002. Copies of the project status reports are available on a password-protected web site: http://www.nitc.state.ne.us/itpm/.

6. Technical Architecture. The Technical Panel has begun the task of developing standards and guidelines for the state's technical architecture. Security policies, accessibility guidelines, and video standards are the furthest along. Other standards are in various stages of development. It is too early to assess what impact these standards and guidelines will have. As a first step in evaluating their effect, the revised instructions for the agency comprehensive information technology plans will request information specific to security, disaster recovery, and accessibility.

7. Grants. Since its inception, NITC has awarded a total of $675,630 in Community Technology Funds and $639,975 in Government Technology Collaboration Funds. Lists of recipients are available on the NITC web sites: http://www.nitc.state.ne.us/cc/grants/2001/ctf2001.htm, http://www.nitc.state.ne.us/sgc/grants/.

   Some of the Government Technology Collaboration Fund projects include:
   - CCPE project to upgrade their network and develop a statewide postsecondary educational facilities database;
   - Arts Council project to convert to e-granting;
   - UNL-Conservation and Survey Division project to digitize historical collection of aerial photographs;
   - Aid for small agencies:
     - Foster Care Review Board funding for hardware to allow access to N-Focus and other state systems;

- Volunteer Service Commission hardware upgrade to allow interaction with federal government application.

Some of the Community Technology Fund projects include:

- City of Aurora technology business incubator;
- Lower Platte North NRD standardized database of surface water features;
- Southeast Community College distance learning network for two health occupations associate degree programs to rural Nebraska;
- Nebraska Commission for the Deaf and Hard of Hearing video conferencing network to provide mental health services for deaf and hard of hearing people in the Panhandle;
- Omaha Tribe of Nebraska will develop an information technology plan that will recommend strategies to enhance governmental, social, and economic infrastructures.

8. Coordination. The NITC and its councils provide a vehicle for organizing collective action on information technology issues. Examples of significant accomplishments include:
   - Developing the state's eGovernment Strategy and Governor's Business Portal Action Plan;
   - Preparing the Community IT Toolkit (in collaboration with the Community Council and Technologies Across Nebraska)
   - Developing the Education Council's policy on course cancellation fees for the NEBSAT system;
   - Facilitating a cooperative purchasing agreement of computers through the Midwest Higher Education Consortium;
   - Investigating the costs and benefits of Internet 2 for K-12 and Higher Education in Nebraska [EC Adequate Rural Bandwidth action item];
   - Coordinating Statewide Distance Learning Report from K-12 (NDE) and Higher Education (CCPE) giving data on programmatic delivery and technical services (NET) [LB543 Intent Language];
   - Researching neighboring states' administration of distance learning and data networks (Iowa, South Dakota, Missouri) [EC Synchronous and Asynchronous Instructional Methods action item];
   - Implementing video standards and developing a migration plan for existing distance learning classrooms [EC Statewide Video Standard action item];
   - Expanding the membership of the Ed Council's Training Advisory Work Group to include Tribal Colleges and K-12 private education and expanding its role to include assessment of the State's I.T. training needs [EC Priority: Identifying and facilitating diverse training opportunities].

Effectiveness Measures

Community Information Technology Effectiveness Measures

Community Indicators

There are few sources, which regularly document the use of information technology by communities or households by state. The U.S. Department of Commerce periodically publishes reports examining Internet access based on data collected by the U.S. Census Bureau. In the last two reports published by the Department of Commerce, Nebraska was slightly below the national average in the percentage of households with Internet access. The most recent report, *A Nation Online: How Americans Are Expanding Their Use of the Internet*, is available at http://www.ntia.doc.gov/ntiahome/dn/index.html .

Percent of Households with Internet Access

	2000[1]	2001[2]
Nebraska	37.0%	45.5%
National Average	41.5%	50.5%

The 2002 State New Economy Index

http://www.neweconomyindex.org/states/2002/index.html

B. Nebraska

Indicator	Rank	Score
Overall*	**33**	54.35
Aggregated Knowledge Jobs	**26**	9.91
Information Technology Jobs *Employment in IT occupations in non-IT industries as a share of total jobs.*	**21**	1.6%
Managerial, Professional & Tech Jobs *Managers, professionals, and technicians as a share of the total workforce.*	**27**	25.3%
Workforce Education *A weighted measure of the educational attainment (advanced degrees, bachelor's degrees, associate degrees, or some college course work) of the workforce.*	**34**	46.6
Education Level of the Manufacturing Workforce *A weighted measure of the educational attainment of the manufacturing workforce.*	**5**	1.56

[1] *Falling Through the Net*. National Telecommunications and Infrastructure Administration. August 2000
[2] *A Nation Online: How Americans are Expanding Their Use of the Internet*. National Telecommunications and Infrastructure Administration. February 2001

Aggregated Globalization Score	**40**	8.71
Export Focus Of Manufacturing *Manufacturing export sales per manufacturing worker.*	**23**	$33,079
Foreign Direct Investment *The percentage of each state's workforce employed by foreign companies.*	**45**	2.8%
Aggregated Economic Dynamism Scores	**41**	7.80
"Gazelle" Jobs *Jobs in gazelle companies (companies with annual sales revenue that has grown 20 percent or more for four straight years) as a share of total employment.*	**32**	12.8%
Job Churning *The number of new start-ups and business failures, combined, as a share of all establishments in each state.*	**45**	16.9%
Initial Public Offerings *A weighted measure of the value and number of initial public stock offerings of companies as a share of gross state product.*	**28**	4.31
Aggregated Digital Economy Scores	**18**	10.98
Online Population *The percentage of adults with Internet access in each state.*	**28**	55.4%
Commercial Internet Domain Names *The number of commercial Internet domain names (".com") per firm.*	**42**	0.41
Technology in Schools *A weighted measure of five factors measuring computer and internet use in schools.*	**1**	3.82
Digital Government *A measure of the utilization of digital technologies in state governments.*	**22**	3.18
Online Agriculture *A measure of the percentage of farmers with Internet access and who use computers for business.*	**22**	3.10
Online Manufacturers *The percentage of manufacturing establishments with Internet access.*	**31**	84.6%
Broadband Telecommunications *A measure of the use and deployment of broadband telecommunications infrastructure over telephone lines.*	**12**	3.62
Aggregated Innovation Capacity	**34**	7.66
High-Tech Jobs *Jobs in electronics manufacturing, software and computer-related services, telecommunications, and biomedical as a share of total employment.*	**19**	4.9%
Scientists and Engineers *Civilian scientists and engineers as a percentage of the workforce.*	**40**	0.33%

Patents *The number of patents issued to companies or individuals per 1,000 workers.*	**41**	0.34
Industry Investment in R&D *Industry investment in research and development as a percentage of Gross State Product (GSP).*	**42**	0.42%
Venture Capital *Venture capital invested as a percentage of GSP.*	**35**	0.16%

* Because of differences in methodology, changes in ranks between 1999 and 2002 cannot all be attributed to changes in actual economic conditions in the state.

Education Information Technology Effectiveness Measures

Education Technology Statistics

Although Nebraska's ratio of the number of students per computer has improved in almost every case, other states have made faster headway by providing even more computers using increased funding. With the decreased allotments from the Education Innovation Fund and the Technology Challenge Literacy Fund for new technology, Nebraska's ranking may continue to decline. Nebraska's Internet access has improved relative to the rest of the country by deploying more T-1 to public schools over the past two years.

Category	Year	National Average	Nebraska Average	Rank
Students Per Instructional Computer	1999	5.7	3.9	2
	2001	4.9	3.7	5
	2002	4.2	3.1	6
Students Per Instructional Multimedia Computer	1999	9.8	7.1	3
	2001	7.9	7.1	5
	2002	6.9	6.0	16
Students Per Internet-connected Computer	1999	13.6	7.2	3
	2001	7.9	5.1	5
	2002	6.8	4.6	3
Of those schools with Internet Access, the % that connect using T-1, cable modem, or faster	1999	56%	49%	30
	2001	67%	77%	7
	2002	72%	69%	29

Government Information Technology Effectiveness Measures

Digital State Survey

For three years, the Center for Digital Government, The Progress & Freedom Foundation, and Government Technology Magazine have conducted a detailed survey of digital government in all 50 states. Nebraska's overall score in 1999/2000 was 14. Nebraska scored relatively well in five categories. In 2001, the Digital State Survey made important changes in content and verification procedures. Detailed rankings are provided only for states that rank in the upper half. Nebraska's standing was 17th overall, with a top-ten ranking in three categories. The 2002 Digital State Survey is underway. A comparison of Nebraska's ranking in 2000 and 2001 is below:

Digital State Survey Results		
Category	2000 Ranking	2001 Ranking
Electronic Commerce / Business Regulation	28	25
Taxation / Revenue	29	9 (tie)
Law Enforcement / Courts	12	Unranked (> 25th)
Social Services	9	5 (tie)
Digital Democracy	13	3
Management / Admin.	10	22
Education	K-12: 31st; Higher Ed: 17th	20
GIS / Transportation	(New category in 2001)	Unranked (> 25th)
Aggregate Ranking	14th	17th

The rankings in specific categories reflect the type of questions asked. For example, in 2000, Nebraska ranked 10th in Management/Administration, because it boasted a CIO, a technology commission, and had completed a statewide technology plan. In 2001, the questions focused on whether the CIO had broad authority, whether the technology commission made decisions on projects, and whether a detailed technical architecture was in place. Nebraska's ranking dropped to 22nd, because we are pursuing a collaborative approach to coordination rather than top-down centralization of all decision-making authority. And, we are still in the early phases of the complex task of defining a technical architecture.

In addition to the survey results above, Nebrask@ Online was a 2001 finalist (top 10 designation among states) in the "Best of the Web" competition. The 2001 Digital State Survey also recognized the Department of Health and Human Services' NFOCUS program as a best practice. NFOCUS is unique among states, because it integrates multiple aid programs and provides access to a wide range of private entities that are involved in client intake and services. It is a fully automated eligibility determination and case management system that integrates twenty-five separate benefits programs.

Copies of the Digital State Survey reports are available at: http://www.centerdigitalgov.com/. The "best of breed" reports are available on the NITC web site at: www.nitc.state.ne.us/news/0201. A copy of this report with a detailed analysis by category is available at: http://www.nitc.state.ne.us/news/0201/SG_nebraska_scorecard.pdf.

Its score in five categories kept Nebraska from ranking in the top 10 for 2001. These include electronic commerce / business regulation, law enforcement / courts, education, and GIS / transportation. Key steps to improve in these categories are summarized below. Part C gives more detailed information about the results, criteria, and best practices for all eight categories.

Electronic Commerce / Business Regulation. Moving business-related forms to the Internet for downloading or submitting online is key to success. Other areas for improvement include online vehicle registration renewals and security and ease of electronic payment options. Progress also depends on successfully engaging citizens and businesses in developing online services and information.

Current Strategy: Governor's Business Portal Initiative; individual agency enhancements.

Law Enforcement / Courts. Key success criteria include digital mobile technologies and a digital communications network for officers. Using digital signatures for the justice system and accepting pleadings, motions, and brief filings online are also areas for improvement. Nebraska must continue its progress in integrating criminal justice and law enforcement information systems.

Current Strategy: JUSTICE (court automation system) enhancements; Criminal Justice Information System (CJIS) Strategic Plan; individual agency enhancements.

Management / Administration. A major reason for our low ranking in this category is the lack of a technical architecture. Another is the lack of authority to implement an enterprise view of information technology. Another benchmark (Governing Magazine's Government Performance Project 2001) also downgraded Nebraska's approach to information technology management for these reasons. That survey indicated the need to accelerate development of the technical architecture, improve evaluation of proposed systems, and establish evaluation of existing systems after implementation.

Current Strategy: Nebraska Information Technology Commission (NITC) planning and project management requirements; project review process; technical architecture standards and guidelines.

Education. Doing better in this component would require a more centralized approach to several issues and services, including steps to insure the quality and effectiveness of distance education programs and using technology to track the academic performance of children in public schools. In addition, Nebraska

educational institutions would need to deploy "e-learning systems" that allow individual students to conduct coursework over the Internet.

Current Strategy: NITC Education Council priorities; individual agency enhancements.

GIS / Transportation. Criteria for success include using geographic information systems (GIS) to improve the accuracy and timeliness of decisions, integrating Intelligent Transportation System data, and providing road construction and traffic information and updates on the State web site. In addition, the State must maintain a clearinghouse for GIS data, with public access. Finally, the survey asked whether states have implemented federal plans to bring the Intelligent Highway System to the state's motor carrier industry.

Current Strategy: GIS Steering Committee Strategic Plan; Department of Roads (DOR) GIS Strategic Plan; DOR Intelligent Transportation System.

Governing Magazine Performance Evaluation

Every two years, Governing Magazine sponsors the Government Performance Project covering five areas of management including financial management, capital management, human resources, managing for results, and information technology. Nebraska scored an average grade of B in 1999 and B- in 2001. Nebraska's grade for information technology management was a C+ in both 1999 and 2001, but dropped significantly relative to other states. In 1999, Governing Magazine ranked 27 states with a grade of C or below. In 2001, only 12 states received a grade of C or below. Nebraska did well in the areas of having a statewide technology plan, sharing data among agencies and across jurisdictions, implementing digital government, and using information technology to support agency functions and programs. Areas for improvement included:

- More centralized authority over information technology decisions (the Governing survey implies a preference for centralized decisions);
- Formal evaluation of proposed hardware and software systems;
- Formal evaluation of information technology systems after implementation;
- A structured process for project management, tracking, and reporting;
- Adopting a comprehensive technical architecture, standards, and guidelines;
- Implementing training.

Security Assessments

In October 2000, KPMG conducted a limited security audit of the state's network. They identified several vulnerabilities stemming from missing or weak security policies and poorly configured servers. Long-term recommendations called for:

- Developing and enforcing security policies and procedures;
- Creating minimum baseline documents for each platform;

- Reviewing and testing device configurations on a regular basis.

The NITC has funded a grant for an external intrusion vulnerability assessment of the state's data network. The Office of the Chief Information Officer will solicit bids in June or July 2002. The assessment will include a vulnerability scan that is designed to mimic how an external party with little or no "inside" information would approach breaching State security measures. Based on the results of the initial phase, selected areas of potential vulnerabilities will be studied in further depth and exploited as far as is reasonable without causing significant disruption of services.

CHARTS Independent Verification and Validation

As part of a federal requirement, the consulting firm of TRW has performed semi-annual reviews of the CHARTS project. Their findings included recommendations for statewide standards in several areas:

- Management standards for large scale and high risk projects;
- Quality Assurance (QA) standards, metrics and tools;
- System development and Configuration Management (CM) process for all state projects.